

Abstract

5 A three-dimensional periodical structure whose period is about $1 \mu\text{m}$ or smaller is provided. At least two kinds of films which have two-dimensionally substantially periodical projections are successively formed in layers substantially periodical to construct structure which is substantially three- dimensionally periodical. For instance, the films are made of materials different in refractive index.

10 The three-dimensional periodical structure whose period is about $1 \mu\text{m}$ or smaller can be obtained by a simple fabricating method. By this structure, the propagation of a wave with a specific wavelength in many solid angular directions including several axial directions parallel to the plane and the thickness direction of the layers can be cut off.